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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,327

10/27/2005

Jingnan Huang

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10/25/2007

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EXAMINER

KIM, HEE SOO

ART UNIT

PAPER NUMBER

2157

MAIL DATE

DELIVERY MODE

10/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/527,327

Applicant(s)

HUANG ET AL.

Examiner

Hee Soo Kim

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/10/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/10/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This action is responsive to application filed on March 10, 2005.

Claims 1-14 are presented for examination.

#### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 3/10/2005 was filed after the mailing date of 3/10/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Examiner's Interpretation***

Before a detailed rejection, a brief interpretation of peer-to-peer networks should be discussed. A peer-to-peer network is a communications network in which each party has the same capabilities and either party can initiate a communication session. Peer-to-peer communication may be implemented in a client/server environment by giving each communication node, server and client, the same capabilities, meaning a client can be configured as a server and a server can be configured as a client, where traffic is running in both directions. Monitoring connections on a peer-to-peer network is the same as monitoring connections in both directions on any network. Also, at any one given time you have a client process and a server process, makes it irrelevant to the type of network being used.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1~14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Napster Client/Server protocol hereinafter Napster in view of Balabine et al. hereinafter Balabine (U.S 7,069,438).

Regarding Claim 1,

Napster taught a method of peer-to-peer connecting devices when implementing dynamic networking, including a connection creating method and a connection disconnecting method of peer-to-peer devices, which is characterized in that:

a connection configuration is performed to all devices requiring a peer-to-peer connection, which includes configuring account information containing a user name and a password for allowing connections and a maximum parallel connection number allowed by a device (Pg. 2, Message 2, Client login message denotes nickname and password; Pg. 15, Message 619 and 620, Client/Server may limit the number of downloads from a particular client);

said connection creating method of peer-to-peer devices includes the steps of:

sending a device connecting request from a connection initiating device in the home network to a connection target device in the network (Pg. 4, Message 200, Client searches for file of interest; Pg. 5, Message 203, Client requests to download file from user with the file of interest);

said connection disconnecting method of peer-to-peer devices includes the steps of:

sending a connection disconnecting message from the connection initiating device or the connection target device to the other (Pg. 9, Message 316, Server sends a message when client is about to be disconnected);

regarding, by the connection target device or the connection initiating device which receives the connection disconnecting message, that this connection has been disconnected (Pg. 18, Message 751, Client pings <user>

connection to determine if connection is alive. Implicitly determines whether the user is disconnected or banned).

Napster did not explicitly teach generating a connection challenge value randomly by the connection target device and sending it to the connection initiating device. However, Balabine taught a method for establishing authenticated network connections made for a challenge response exchange between client and server to further verify the source of the TCP/IP session prior to the establishment of any connection (Col. 8, Lines 11~21, Fig. 13).

Napster also did not explicitly teach generating a connection reply value according to the received connection challenge value by the connection initiating device and sending it to the connection target device. However, Balabine taught (Col. 8, Lines 21~28, Fig. 13).

Napster also did not explicitly teach sending a connection response message from the connection target device to the connection initiating device according to the connection reply value. However, Balabine taught server computer decrypts the challenge sent by client computer and verifies the challenge was transformed correctly (Col. 8, Lines 30~34, Fig. 13).

Napster also did not explicitly teach judging a result of connection according to the connection response message by the connection initiating device, if the connection response message includes information on a successful connecting result, establishing a peer-to-peer connection between the connection initiating device and the connection target device. However, Balabine taught server computer decrypts the challenge sent

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by client computer and verifies the challenge was transformed correctly, establishing a connection between the server and client (Col. 8, Lines 30~34, Fig. 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to implement, in Napster's system, the provision to allow challenge authentication between the connection initiating device and the connection target device to be exchanged, generating acknowledgments by the connection initiating device according to the challenge key generated by the connection target device, judging the acknowledgments, and establishing connection between the peer devices based on the acknowledgments, as this would provide protection to peer devices from unsanctioned connections, mitigate hack attacks on the local network or in close proximity to the devices and concealment from unauthorized parties.

Regarding Claim 2,

Napster taught said connection setting to devices is a direct setting through a human-machine interface on devices or a remote setting through other devices having human-machine interfaces (Napster: Pg.19, Message 810, Request a change in server configuration variables).

Regarding Claim 3,

Napster taught said connection initiating device is a service providing device or a service utilizing device, and said connection target device is a service utilizing device or a service providing device (It is well-known in the art, Napster is a file-sharing peer-to-peer platform providing music file sharing service to users).

Regarding Claim 4,

Napster taught with respect to the device connecting request in said step a, the message fields include type of message, serial number of message, user name and

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serial number of connection request (Pg. 2, Message 2, the message consists of nickname, password, port, client-info, link-type, and num fields).

Regarding Claim 5,

Napster taught wherein in said step b, said connection allowed further includes the steps of:

judging whether the number of connection initiating devices currently connected with the connection target device has reached the upper limit of the allowed connection number (Pg. 15, Message 619, uploading client sends message to notify downloader limit was reached); and

judging whether the user information of the connection initiating device is in the connection target device (Pg. 6, Message 207 and 208, Napster by default allows all connections to be made with users possessing the file in interest. Napster also allow users to add other users to their hotlist which combined with Message 209 or Message 210 allows notifications of hotlist user connection or disconnection).

Regarding Claim 6,

Napster taught when in the step b, the number of devices connected with the connection target device has already reached the upper limit of the allowed number of connected devices, then in the step e, the connection target device sends a connection response message whose connecting result is overload to the connection initiating device (Pg. 15, Message 619, uploading client sends message to notify downloader limit was reached and no further simultaneous downloads are allowed);

when in step b, there is no user information of the connection initiating device is present in the connection target device, then in the step e, the connection target device



sends a connection response message whose connecting result is denial to access to the connection initiating device (Pg. 9, Message 320 and 321, Although Napster by default allows all connections to be made with users possessing the file in interest, Napster also allow users to ignore others by adding them into the ignore list. Any connections requesting from users in the ignore list will trigger a denial access message).

Regarding Claim 7,

Balabine further taught the connection challenge value sent in said step b includes type of message, serial number of message, serial number of connection response message, connecting result, authenticating algorithm identifier and challenge value (Col. 6, Lines 36~49, Fig. 10, the packet contains ID of authentication method and authentication data).

Regarding Claim 8,

Balabine further taught the message of challenge reply value sent in said step c includes type of message, serial number of message, serial number of connection request and the reply value constituted by a reply character string (Col. 8, Lines 12~34, Fig. 13).

Regarding Claim 9,

Napster taught with respect to the connection response message in said step d, the message fields include type of message, serial number of message, serial number of connection response message and connecting result (Pg. 5, Message 203 and 204).

Regarding Claim 10,

Napster taught the connection target device and the connection initiating device increase the number of currently connected devices by one (Pg. 8, Message 218).

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Regarding Claim 11,

Balabine further taught in step b, said connection target device also saves the connection challenge value (Col. 13, Lines 45~50);

in said step c, said connection initiating device retrieves key information corresponding to the connection challenge value and generates said connection reply value together with the connection challenge value (Col. 8, Lines 12~34);

in said step d, the connection target device judges validity of the connection reply value according to the saved connection challenge value and the key corresponding to this connection challenge value, and when it is valid, sends a connection response message about success of connection to the connection initiating device, and when it is invalid, sends a connection response message about denial of access to the connection initiating device (Col. 13, Lines 54~67, It is implicit any time an authentication between a client and server is determined to be invalid, accordingly produce a denial access message back to the client disallowing the connection).

Regarding Claim 12,

Balabine further taught after said step c, a transmission key is generated between the connection initiating device and the connection target device which have established a peer-to-peer connection there between in accordance with an encryption method defined in a security mechanism, and is used to transmit subsequent data (Col. 8, Lines 12~34).

Regarding Claim 13,

Napster taught with respect to the connection disconnecting request message in said step f, the message fields include type of message, serial number of message and reason for disconnecting connection (Pg. 9, Message 316).

Regarding Claim 14,  
Napster taught the connection target device and the connection initiating device decrease the number of currently connected devices by one (Pg. 8, Message 219).

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 2003/0217136, US 2001/00027498, US Patent 7,222,187, US Patent 7,069,438, US Patent 7,225,258.

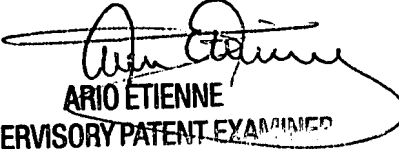
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hee Soo Kim whose telephone number is (571) 270-3229. The examiner can normally be reached on Monday - Friday 8:00AM - 5:30PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-5001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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